ENVIRONMENTAL CHEMISTS

Date of Report: November 13, 1996 Date Received: November 7, 1996 Project: Metro Self Monitor, PO #55193 Date Samples Extracted: November 8, 1996 Date Extracts Analyzed: November 8, 1996

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, AND ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M55193	0.22	0.18	0.17	< 0.05
Method Blank	< 0.05	< 0.05	< 0.05	< 0.05

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Date of Report: November 13, 1996 Date Received: November 7, 1996 Project: Metro Self Monitor, PO #55193

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 73764 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromiun		0.22	0.23	4a	0-20
Copper	mg/L (ppm)	0.19	0.19	0a	0-20
Nickel	mg/L (ppm)	0.21	0.21	0a	0-20
Zinc	mg/L (ppm)	< 0.05	<0.05	nm	0-20

Laboratory Code: 73764 (Matrix Spike)

	Reporting	Spike	Sample	% I	Recovery	Acceptanc	Relative e Percent
Analyte:	Units	Level	Result	MS	MSD	Criteria	<u>Difference</u>
Chromium	mg/L (ppm)	5	0.22	95	99	80-120	4
Copper	mg/L (ppm)	5	0.19	93	95	80-120	2
Nickel	mg/L (ppm)	10	0.21	95	99	80-120	4
Zinc	mg/L (ppm)	5	< 0.05	98	102	80-120	4

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS MSD	Acceptano Criteria	Relative e Percent Difference
Chromium	mg/L (ppm)	5	103 103	80-120	0
Copper	mg/L (ppm)	5	99 97	80-120	2
Nickel	mg/L (ppm)	10	104 104	80-120	0
Zinc	mg/L (ppm)	5	106 106	80-120	0

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

FORM

SAMPLE CHAIN OF CUSTODY

RNJ BI 11-7-96 2:15 PM

Send Report To: Company Address 628	Kas Coppe	n Won	K	Contac	CI GENAC	D Thoras	2502)
City, State, Zip See	Atte cus.	58134					
Phone # (200) 38	2-8375			Date_	11-7-	96	
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Sample #	Date/Time Sampled	Type of Sample	# of Jars	Lab Sample i	.	Analyses Requested	
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley D. Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

November 13, 1996

INVOICE # 96ACU1113-2 DUPLICATE COPY

Accounts Payable Alaskan Copper Works 628 South Hanford Seattle, WA 98134

RE: Project Metro Self Monitor, PO #55193: Results of testing requested by Gerry Thompson, Project Manager for material submitted on November 7, 1996.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley D. Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

November 13, 1996

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on November 7, 1996 from your Metro Self Monitor, PO #55193 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson

Chemist

keh

Enclosures ACU1113R.DOC